

**REMARKS**

Paper No. 10, the Official Action of July 22, 2003, made final, has been carefully studied. The claims in the application remain as claims 1-13, even upon entry of the amendments presented above. Applicant again respectfully maintains that the claims define novel and unobvious subject matter under §§102 and 103 and therefore should be allowed. Accordingly, favorable reconsideration, entry of the amendments presented above and formal allowance are all respectfully urged.

Claim 1 is proposed to be amended to include features previously present in other claims. Thus, specifying at least one of a rotor, cylinder, front cylinder cover or rear cylinder cover is consistent with previously pending claims 4 and 13. As all these air motor members have a complex shape, that feature, inherent previously in claims 4 and 13, has been added to the preamble of claim 1. The Vickers hardness of 800-1200, previously present in claim 2, has been added to claim 1. Also added to claim 1 is the feature that the nitrosulphurization layer has a substantially uniform thickness, support being found in the third from last line on page 10 of the specification.

Claim 2 is proposed to be amended to recite the mean Vickers hardness of 1100, support being found in example 1, third line of the bottom paragraph on page 12.

Claim 4 is proposed to be amended to add a further limitation not present in claim 1.

Claim 12 is proposed to be amended to better specify the results of example 1, support being found in the bottom paragraph on page 12 of the specification.

Claims 1-12 have been rejected as obvious under §103 from applicant's alleged admission of prior art in view of Kojima and "Plasma (ion) Nitriding" (hereinafter "O'Brian"). This rejection is respectfully traversed.

Applicant respectfully repeats by reference the arguments against this proposed combination as set forth in the last Reply, particularly pages 6-9 thereof. Although the Office Action is lengthy and includes a section entitled "Response to Arguments", the PTO has not answered or rebutted applicant's argument at the middle of page 7 of the last Reply that the present invention constitutes non-obvious subject matter in the recognition of the problem, e.g. note *Ex parte Campbell*, 211 USPQ 575, 576<sup>1</sup>. If there was no recognition of the problem in the field of air motors, and there is no

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<sup>1</sup> Also see *Diversitech v. Century Steps*, 7 USPQ2d 1315, 1318 (Fed Cir 1988), citing *In re Wright*, 6 USPQ2d 1959, 1962 (Fed Cir 1988).

evidence that there was, then to do what applicant did was unobvious.

Those skilled in applicants' art of air motors had no recognition of the problem. If the PTO has evidence to the contrary, applicant would like to see what that evidence is. It was the applicant who came to the realization of what the problem was, and this is evident from the introductory portions of applicant's specification, there being no evidence or good reasoning to the contrary. The case law supports applicant's position. From *In re Costello*, 178 USPQ 290,92:

There is no justification for simply ignoring appellant's allegations of unexpected results.

From *Ex parte Johnson*, 40 USPQ 576:

The examiner makes no showing... [that applicant's statement is incorrect] and this tribunal is not so expert in the art as to disagree with applicant's sworn description and agree with the examiner without cause.

From *In re Andrews*, 168 USPQ 360,66:

We cannot take judicial notice of ... the impossibility of what appellant asserts.... Accordingly, we reverse the rejection which, in our view, ignored the thrust of appellant's application in this regard.

From *Ex parte Ilgen and Michl*, 172 USPQ 316,17:

As the main opinion notes, appellant's specification asserts an improved result.... The examiner erred in failing to show cause for not giving effect to this assertion.

From *Ex parte Leonard*, 187 USPQ 122, 123-124:

We should note that in so holding [in favor of the applicant] ..., we rely heavily on appellants' representations.... We are aware of no good reason to challenge appellants' presumptively accurate disclosure.

Again, there is no evidence contrary to the applicant's position. The problem was simply never recognized in the air motor field.

Insofar as Kojima is concerned, it only relates to the sulfurizing nitride processing of a metal sheet, not a complex shape. Kojima gives no hint of what might occur if such a process were attempted to be carried out on a complex shape, as in the present invention. Indeed, when various types of operations are attempted to be given to parts of complex shape, it is often found difficult to form a uniform processing layer. Nevertheless, applicant has provided such a uniform surface treatment layer, formed on surfaces of parts of complex shape, according to the present invention.

The present invention provides an air motor part of complex shape having a hard surface wherein the hardness over the entire area of the complex shape is uniform, and wherein the thickness of the hardened surface is relatively uniform as well. Attention is invited to page 16 of applicant's specification, lines 6-10 which states that because hardness decreases continuously downwardly from the hardened surface,

adhesion is excellent, thus solving the friability problem inherent in the prior art and mentioned in applicant's specification at page 2, with much improvement resulting.

Accordingly, while the endurance life if motor was only about 1500 hours for the existent surrounding member, the endurance life of the motor un the use of the vane motor by using the surrounding member according to this invention has been improved outstandingly as from 8,000 to 10,000 hours, and the motor life at least about 5 to 6 times the existent case can be obtained.

The improvements achieved according to the present invention are truly surprising in the field of air motors.

Next, insofar as recitations which appear in the claims are concerned, the PTO admits in the rejection that the prior art does not show or teach all of applicant's recitations, e.g. noting the second paragraph on page 4 of the final Action. In effect, the PTO takes the position that features not provided by the proposed combination would still have been obvious without any prior art.

Applicant respectfully notes the burden is initially on the PTO to establish a *prima facie* case of obviousness, noting MPEP 706.02(j). With respect, it is not sufficient to simply state that the things the applicant did do "not impart patentability" as stated in the rejection, when there is no evidence whatsoever in support of such a conclusion.

Applicant respectfully relies on *Ex parte Levengood*, 28 USPQ2d

1300, 1301-1302 (BPAI 1993):

In order to establish a *prima facie* case of obviousness, it is necessary for the examiner to present **evidence**, preferably in the form of some teaching, suggestion, incentive or inference in the applied prior art, or in the form of generally available knowledge, that one having ordinary skill in the art **would have been led** to arrive at the claimed invention. [Citations omitted; italics in original].

Where is the evidence to support the conclusion of obviousness?

At best, the examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the relevant art would have been able to arrive at appellant's invention because he had the necessary skills.... This is an inappropriate standard for obviousness. [Citations omitted] That which is within the capabilities of one skilled in the art is not synonymous with obviousness [Citations Omitted].

There is no basis for the conclusion in the rejection of the obviousness of features which are not shown in the prior art.

Applicant understands the PTO's position to mean that what the applicant did is, in the examiner's view, a mere matter of choice which could be done by any person skilled in the art (if he or she wanted to do so). But see *Ex parte Haas et al*, 144 USPQ 98, 99:

The Examiner ... says that [applicants' changes] are a matter of choice. It is not a matter of choice presented by the prior art....

Also see *Ex parte Deere*, 118 USPQ 541, 544; and *Ex parte Krantz*, 61 USPQ 238.

In an unpublished decision (September 30, 1986) in Appeal 580-81, the Board, in reversing a rejection in a case where the examiner had brushed aside a recitation appearing in the claim under appeal, concluded as follows:

The examiner's assertion at page 4 of the Answer that the proposed modification would have been "an obvious matter of engineering design choice well within the level of one of ordinary skill in the art" is a conclusion, rather than a reason.

Applicant respectfully submits that it is contrary to fact in the present case that what is claimed and not shown would require nothing more than an obvious modification; it is also contrary to the well established case law, including that cited above, which requires the prior art to show that alternatives are equivalent (see *In re Scott*, 139 USPQ 297; and *In re Flint*, 141 USPQ 299) before the PTO can validly hold that doing one in place of the other would simply have been obvious. There is no such prior art of record in the present case.

For a more recent decision on this point, attention is respectfully invited to *In re Chu*, 36 USPQ2d 1089, 1095 (Fed Cir 1995). Also see *In re Rijckaert*, 28 USPQ2d 1955, 1957 (Fed Cir 1993).

In short, applicant respectfully submits that he cannot accept what effectively amounts to "official notice" that the features recited and not shown in any prior art would have been obvious. If prior art exists contrary to applicant's position, then applicant has a right to face such prior art. If no such prior art exists, the claims should be allowed.

Next, the PTO seems to basing its unsupported assumption (that there are no unexpected results) on implied inherency. But there is no inherency and there is no obviousness.

Applicant respectfully notes that obviousness and inherency are two different things. Applicant believes that the examiner will agree that normally a rejection must be based on what a reference shows rather than what it does not show, i.e. a rejection normally is not to be based on silence in a reference. *In re Burt et al*, 148 USPQ 548, 553 (CCPA 1966):

Silence in a reference is hardly a proper substitute for an adequate disclosure of facts from which a conclusion of obviousness may justifiably follow.

The rejection based on §103 was reversed.

Attention is also respectfully invited to *In re Henderson*, 146 USPQ 372, 375 (CCPA 1965), where the court stated in part as follows:



We are not impressed by the Board's view... that because the ether additives would "inherently function" to produce the decreased sensitivity, the claimed ethers are therefore obvious. .... The fact remains that appellant has *discovered* that when [one does what appellant has claimed, an improved result occurs.] The mere notion that such discovery would "flow naturally" from what appellant did does not mean that the discovery could be *predicted* from what the art had done. (Italics in original; bracketed material added)

Attention is also respectfully invited to *In re Spormann et al*, 150 USPQ 449, 452 (CCPA 1966), where the court stated in part as follows:

The Board apparently thought that the minimizing of sulfate production would be *inherent* in the process of [the cited reference]. .... As we pointed out in *In re Adams...*, 148 USPQ 742, the inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown.

The rejection was reversed.

Also, please see *In re Shetty*, 195 USPQ 753, 756 (CCPA 1977), where the claims were directed to a method of curbing appetite in animals by administering certain adamantane compounds. The prior art taught the administration of various adamantyl compounds for other purposes. In urging the court to affirm the decision below of the Board of Appeals, the solicitor argued:

... the compounds of claim 51 are obvious from and unpatentable over the corresponding Break compound and the Narayanan disclosure of a dosage which corresponds to appellant's disclosed appetite curbing dosage (therefore, *inherently* appetite curbing).  
[emphasis of the Court]

In reversing the rejection, the Court stated as follows:

We cannot accept this conclusion. The issue here is whether the claimed method of curbing appetite would have been obvious. That appellant's "amount effective to curb appetite" corresponds to or inheres in Narayanan's amount "to combat microbial infestation" does not persuade us of the obviousness of appellant's method.  
(citation omitted; emphasis of the court).

The Court also noted and quoted from *In re Spormann, supra*, with reference *In re Adams, supra*.

It is true that in some rare cases rejections under §102 may be based on inherency. In those cases, the inherency must be reasonably certain or inevitable. As stated in *In re Brink*, 164 USPQ 247, 249:

Absent a showing [by the PTO] of some reasonable certainty of inherency, the rejection... under 35 USC 102 must fail.

Also see *Ex parte Cyba*, 155 USPQ 756, 757 (1967); and *In re Oelrich* 212 USPQ 323, 326 (CCPA 1981).

The premise of the rejection is wrong. The references applied have no relationship to the field of the present invention which is the field of air motors. Applicant's results were clearly not "reasonably certain" or "inevitable". It could not have been predicted or foreseen

that the problem which existed in the prior art of air motors, which problem was not even recognized, could be solved by the present invention.

Applicant's claims define non-obvious subject matter, and applicant requests withdrawal of the rejection.

Claim 13 has been rejected as obvious from the same prior art applied against claim 1, further in view of Kramer et al USP 3,767,335 (Kramer). This rejection is respectfully traversed.

Claim 13 depends from and incorporates the subject matter of claim 1. Kramer has only been cited to show that an air motor is old, but there is no relationship between Kramer, on the one hand, and Kojima and O'Brian on the other hand. Applicant's points made above are fully applicable to this rejection.

Applicant respectfully requests withdrawal of the rejection for the same reasons as mentioned above with respect to claims 1-12.

With respect to the section of the final Action under the heading "Response to Arguments", applicant has already addressed the position of the PTO about advantages "which would flow naturally" from the prior art, noting *In re Henderson, supra*.

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As regards the substitution of  $N_2$  for  $NH_3$ , it appears that the PTO has misunderstood applicant's point as raised on page 8 of the preceding Reply. Thus, applicant's position is that if it were obvious to substitute nitrosulphurization for nitridation, it then would not have been logical to go back to some secondary prior art relating to nitridation, such as O'Brian, to further modify what the nitrosulphurization prior art teaches. In other words, having decided **not** to use nitridation, it then does not make sense to back to a reference which deals only with nitridation to change something in the reference which teaches nitrosulphurization. The PTO apparently has no answer to this point. The PTO relies on applicant's own disclosure to reach a conclusion of obviousness, contrary to what 35 USC 103 permits.

Applicant respectfully requests favorable reconsideration, entry of the amendments presented above and formal allowance.

Respectfully submitted,

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